

Sunny Boy 1100U Technical Data

Input Values (240V)

Recommended max PV Power	P_{PV}	1250 to 1400 Wp STC
Max DC Power	$P_{DC, max}$	1100 Wp PTC
Max DC Voltage	$V_{DC, max}$	400 Vdc
PV Voltage range, MPP	V_{PV}	129V to 400V
Max input current	$I_{PV, max}$	9.5 A
DC Voltage ripple	V_{PP}	< 10%
DC Disconnectors		Optional external DC Disconnect/Breaker
Pole confusion protection		Short Circuit diode
Ground fault protection	I_{Dif}	> 1000 mA

Output Values (240V)

Max AC Power	P_{AC}	1100 W
Total Harmonic Distortion	THD_{IAC}	< 4% (With $K_{Vgrid} < 2\%$ and $P_{AC} > 0.5 P_{ACnom}$)
Operating Range, Grid Voltage	V_{AC}	213 V to 262 V
Operating Range, Grid Frequency	f_{AC}	59.3 Hz - 60.6 Hz
Phase Shift (Ref. Fundamental)	$\cos(\phi)$	0°

Output Protection

Islanding Protection		V_{AC} ; f_{AC} in accordance with UL 1741
Ground Fault Protection		IDIF; In accordance with UL 1741
AC Disconnect		External AC Breaker
Short Circuit Protection		Current Controlled
Overvoltage Classification		III

Efficiency

Peak Efficiency		93 % (Rebate Efficiency)
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Power Consumption

Internal consumption in operation		< 4 W
Internal consumption at night		0 W

American Standards

Hardware Safety		UL 1741
Firmware Safety		UL 1998
Power Quality		IEEE 519
Anti-Islanding		IEEE 929

Surge Testing		ANSI C62.41, C1 & C3
Electro-Magnetic Interference		FCC Part 15 A & B
European Standards		
EMC		EN 50081,T.1 & EN 50082,T.1
Grid Interference		EN 61000-3-2
Grid Monitoring		DIN VDE 126
Low-Voltage regulation		EN 50178
CE Conformity		EN 60146, Teil 1-1
Size and Weight		
Width		322 mm
Height		320 mm
Depth		180 mm
Weight		ca. 21 kg
Enclosure Ratings		
DIN EN 60529		IP 65
NEMA Rating		NEMA 4X
Ambient Conditions		
Ambient Temperature Range		-13°F to +140°F or -25°C to +60°C
Relative Humidity Level		0 to 100%